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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/882,006	06/15/2001	Jeffrey S. McCarley	YOR9-2001-0229 (8728-506)	9912
46069	7590	01/04/2005	EXAMINER	
F. CHAU & ASSOCIATES, LLC 130 WOODBURY ROAD WOODBURY, NY 11797			LAMARRE, GUY J	
			ART UNIT	PAPER NUMBER
			2133	

DATE MAILED: 01/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/882,006

Applicant(s)

MCCARLEY ET AL.

Examiner

Guy J. Lamarre, P.E.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 1-4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

FINAL OFFICE ACTION

0. This office action is in response to Applicants' Amendment of 6/30/04.
- 0.1 **Claims 1, 3-7, 15** are amended. **Claims 1-15** remain pending.
- 0.2 The prior art rejections to the claims of record are maintained in response to Applicants' Amendments.
- 0.3 All remaining rejections and objections of record are withdrawn in response to Applicants' Amendments.

Response to Arguments

1. Applicants' arguments have been fully considered, but they are not found persuasive.

REMARKS

2. In response to **Claims 1-15**, Applicants argue, on page 14 para. 2 et seq., that the prior art of record does not teach the claimed invention, and that there is no motivation to combine the prior art references of record.

Examiner disagrees and notes that Applicants concede, on page 14 last para., that the prior art of record does disclose signal processing means of comparable data partitioning means. **Examiner** maintains that such signal processing means provides equivalent functionality.

For example, **Makino's** *noise state* is simply the 'noisy/errored' data sequence that is replaced by a different character code when the received data sequence does not match the predefined codes based on compare means.

Such data replacement is a result of a noise/error state in the received plural-byte data sequence. The *most probable data sequence* is the resulting segment comprising the previously defined segmented bit length known to be error-free.

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Such data replacement also presupposes that the errored/noise byte in the received data sequence had been located in said received data sequence prior to substitution of said errored/noise byte to thereby result in a corrected received data sequence.

In response to Applicants' allegation of **lack of motivation to combine**, Examiner disagrees and notes that: 'To establish a prima facie case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Therefore, such suggestion or motivation may be found not only in the references but also in the knowledge generally available to one of ordinary skill in the art.

Hence, "In determining the propriety of the Patent Office case for obviousness in the first instance, it is necessary to ascertain whether or not the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the reference before him to make the proposed substitution combination, or other modification." *In re Linter*, 458 F.2d 1013, 173 USPQ 560, 562 (CCPA 1972).

Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 11192).

The rationale to modify or combine the prior art does not have to be expressly stated in the prior art; the rationale may be expressly or impliedly contained in the prior art or it may be reasoned from knowledge generally available to one of ordinary skill in the art, established scientific principles, or legal precedent established by prior case law. *In re Fine*, 837 F. 2d 1071,

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5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). See also *In re Eli Lilly & Co.*, 902 F.2d 943, 14 USPQ2d 1741 (Fed. Cir. 1990) (discussion of reliance on legal precedent); *In re Nilssen*, 851 F.2d 1401, 7 USPQ2d 1500, 1502. (Fed. Cir. 1988) (references do not have to explicitly suggest combining teachings); *Ex parte Clanp*, 227 USPQ 972 (Bd. Pat. App. & Inter. 1985); and *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993) (reliance on logic and sound scientific reasoning).

Also in reference to *Ex parte Levengood*, 28USPQ2d, 1301, the Court stated, "Obviousness is a legal conclusion, the determination of which is a question of patent law. Motivation for combining the teachings of the various references need not be explicitly found in the references themselves, *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). Indeed, the examiner may provide an explanation based on logic and sound scientific reasoning that will support a holding of obviousness. *In re Soli*, 317 F.2d 941, 137 USPQ 797 (CCPA 1963)."

Therefore, said claims are not distinguished over the prior art of record.

Claim Rejections - 35 USC ' 103

3. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over MAKINO (US Patent No. 5,898,385; 27 Apr. 1999) in view of **Tugnait** '*Adaptive estimation and identification for discrete systems with Markov jump parameters*,' Oct 1982; IEEE; pages 1054 - 1065, vol. 27).

As per Claims 1-3, 12, 15, Makino substantially discloses ECC means for sequence or text or alphanumeric (in ASCII representation) data (col. 1 line 21 et seq.) or Chinese characters or mixed Chinese/ alphanumeric characters wherein errors are detected and corrected in said sequence, e.g., in col. 6 line 1 et seq., and Figs. 1-6 and related description, comprising means for: receiving a byte sequence, generating or defining a plurality of states or ECC means for said byte sequence; transmitting said byte sequence along with ECC means or plurality of states, receiving said byte sequence along with ECC means or plurality of states, detecting errors

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therein and designating one or more noise states from among the plurality of states in said sequence where errors probably are located; generating a most probable state sequence for the byte sequence; utilizing said state sequence to identify all noise or errors in the byte sequence; and localizing and correcting (col. 4 line 35) said noise or errors in said noise states in Fig. 4; means to state transition in col. 4 line 13 et seq., storage means via code or look-up table in col. 1 line 27; means to process sequence based on probabilistic or statistical analysis in col. 3 line 50 et seq.; **Markov or state transition means** in col. 4 line 11 et seq.; means to select valid sequence or characters of length or state based on segmentation parameters in Figs. 2-3 & 6, and col. 1 line 30, col. 2 line 42 et seq., e, g., *“the signal processing means recognizes special codes within received data that has been segmented by character segmentation at two or more different bit lengths, and when a special code is recognized, segments the received data that follows this special code on the basis of character segmentation at the bit length specified by the special code. On this case, it may be adapted that the radio paging receiver segments received data in units of 4 bits, 8 bits and 16 bits or in units of 4 bits, 7 bits and 14 bits”*.

Not specifically described in detail by **Makino** is the step whereby **Markov or state transition means** comprises a transition probability matrix.

However Tugnait, in an analogous art, discloses an estimation means for **Markov or state transition means with a transition probability matrix**. {See **Tugnait**, Id., Abstract.}. **Therefore**, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the procedure of **Makino** by including therein **transition probability matrix computation means**, as taught by **Tugnait**, because such modification would provide the procedure of **Makino** with a method whereby estimation of the Markov transition probabilities is made consistent. {See **Tugnait**, Id., page 1055 col. 1 para. 2.}

As per Claims 4-11 and 13-14, Tugnait discloses conditional probability means in page 1055 col. 1 para. 4 – page 1061.

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Conclusion

4. THIS ACTION IS MADE FINAL. See MPEP § 609(B)(2)(i). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

4.1 Any response to this action should be mailed to:

Commissioner of Patents and Trademarks, Washington, D.C. 20231

or faxed to: (703) 872-9306 for all formal communications.

Hand-delivered responses should be brought to Customer Services, 220 20th Street S., Crystal Plaza II, Lobby, Room 1B03, Arlington, VA 22202.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Guy J. Lamarre, P.E., whose telephone number is (571) 272-3826. The examiner can normally be reached on Monday to Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert De Cady, can be reached at (571) 272-3819.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-3609.

Information regarding the status of an application may also be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

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applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Guy J. Lamarre, P.E
Primary Examiner
12/23/04
